PIONEER
The Art of Entertainment

Service Manual

ORDER NO.
ARP2422

STEREO AMPLIFIER

M-J200

HEWZIW

- **Refer to the service manual ARP2381 for M-J200/HB.**

- **This manual is applicable to M-J200/HEWZIW.**

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS SERVICE INC. P.O. Box 1760, Long Beach, California 90801 U.S.A.
PIONEER ELECTRONICS OF CANADA, INC. 300 Allstate Parkway Markham, Ontario L3R 0P2 Canada
PIONEER ELECTRONIC [EUROPE] N.V. Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia TEL: [03] 580-9911
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1. CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

M-J200/HEWZIW and M-J200/HB have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		M-J200/HB	M-J200/HEWZIW	
⚠	AC Power cord	ADG1103	ADG1102	
	FM Antenna	ADH1005	.....	
	FM Antenna Assembly	.....	ADH1002	
	Operating Instructions (English/French)	ARE1215	.....	
	Operating Instructions (German/Italian)	.....	ARC1314	
◉	POWER Assembly	AWZ3782	AWZ3784	
◉	HEAD PHONE Assembly	AWZ3787	AWZ4167	
◉	POWER SW Assembly	AWZ3789	AWZ3812	

◉ POWER Assembly

AWZ3782 and AWZ3784 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ3782	AWZ3784	
	C205	CCPUSL470J50	CCCSL221J50	
	C206 — C208	CCCSL470J50	CCCSL221J50	
	C701, C702	.....	CQMXA103J100	
	C705, C706	.....	CCDSL680J50	
	C225	.....	CCCSL101J50	
	L701, L702	ATH1004	ATH1009	
	R339	RD1/8PM102J	RD1/8PM223J	
	R705, R706	.....	RD1/4PM100J	

◉ POWER SW Assembly

AWZ3789 and AWZ3812 have the same construction except for the following:

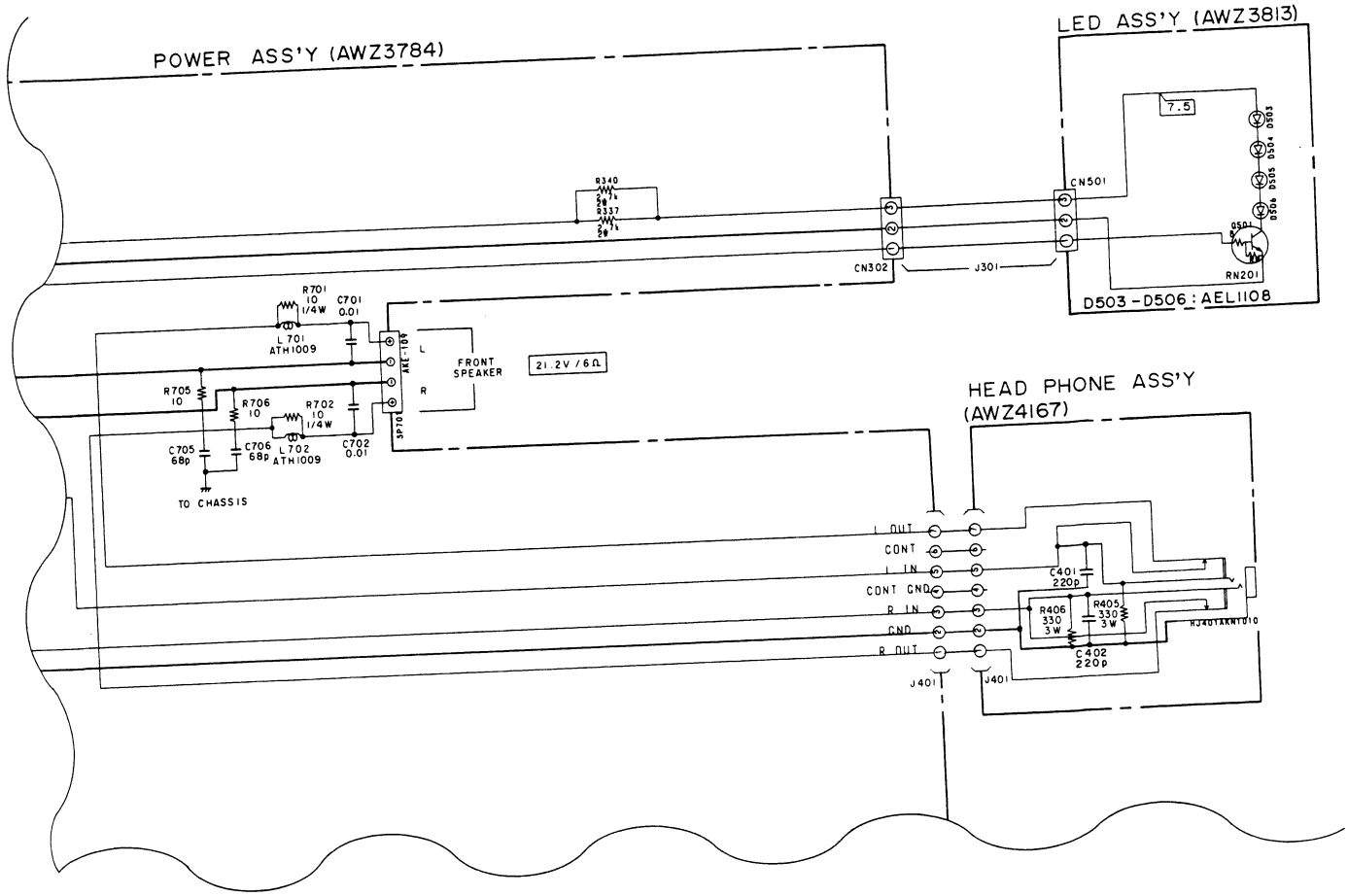
Mark	Symbol & Description	Part No.		Remarks
		AWZ3789	AWZ3812	
⚠	L801	.....	ATF-151	

◉ HEAD PHONE Assembly

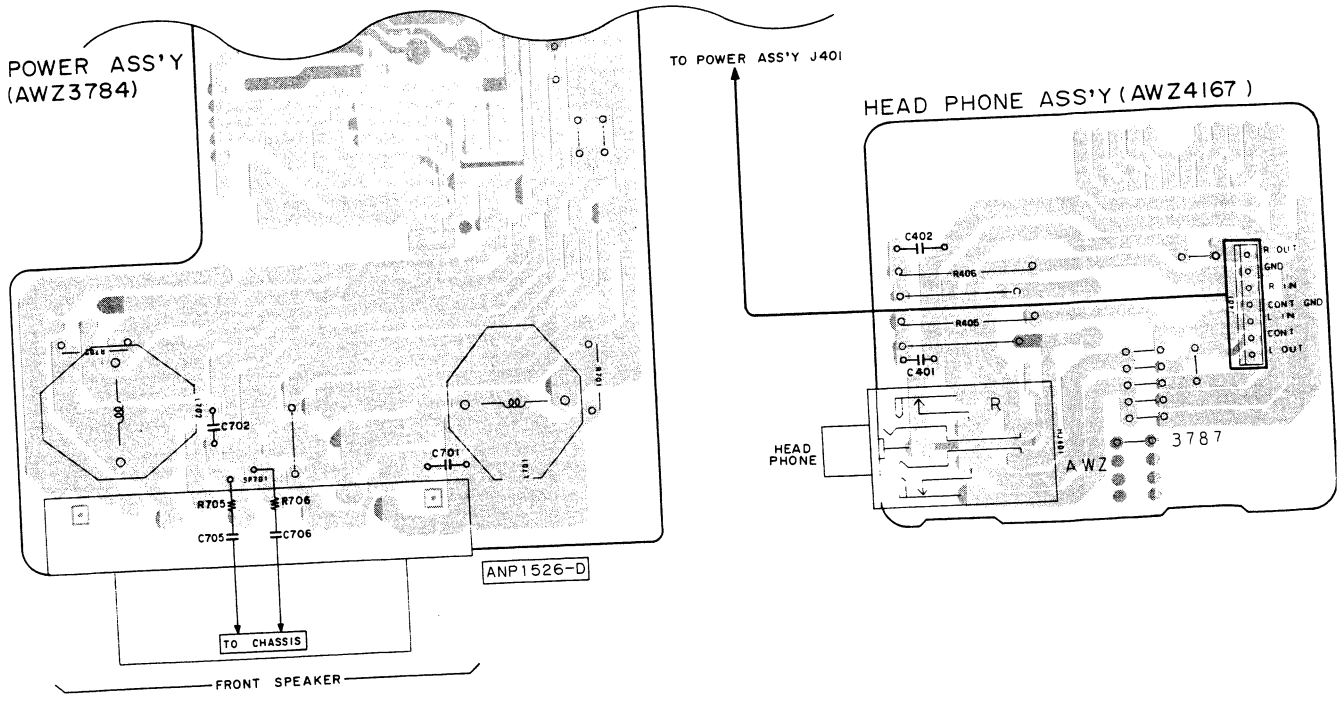
AWZ3787 and AWZ4167 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ3787	AWZ4167	
	C401, C402	.....	CCCSL221J50	

2. SCHEMATIC DIAGRAMS



3. PCB CONNECTION DIAGRAMS



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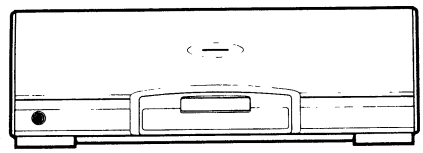
The Art of Entertainment

Service Manual



ORDER NO.
ARP2381

STEREO POWER AMPLIFIER

M-J200

M-J200 HAS THE FOLLOWING :

Type	Power Requirement	Remarks
HB	AC 220 V-230 V, AC 230-240 V(switchable)*	
HE	AC 220 V-230 V, AC 230-240 V(switchable)*	
SD	AC 110 V, 120 V-127 V, 220 V, 240 V(switchable)	
YPW	AC 240 V only	

* Change the connection of the power transformer's primary wiring.

- **This manual is applicable to the M-J 200/HB, HE, SD and YPW types.**
- **As to the M-J200/HE, SD and YPW types, refer to page 17.**
- **This product is a component of a system. As to the system composition, refer to the system manual.**
- **This product does not function properly when independent ; to avoid malfunctions, be sure to connect it to the prescribed system component, otherwise damage may result.**

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PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
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1. EXPLODED VIEWS, PACKING AND PARTS LIST

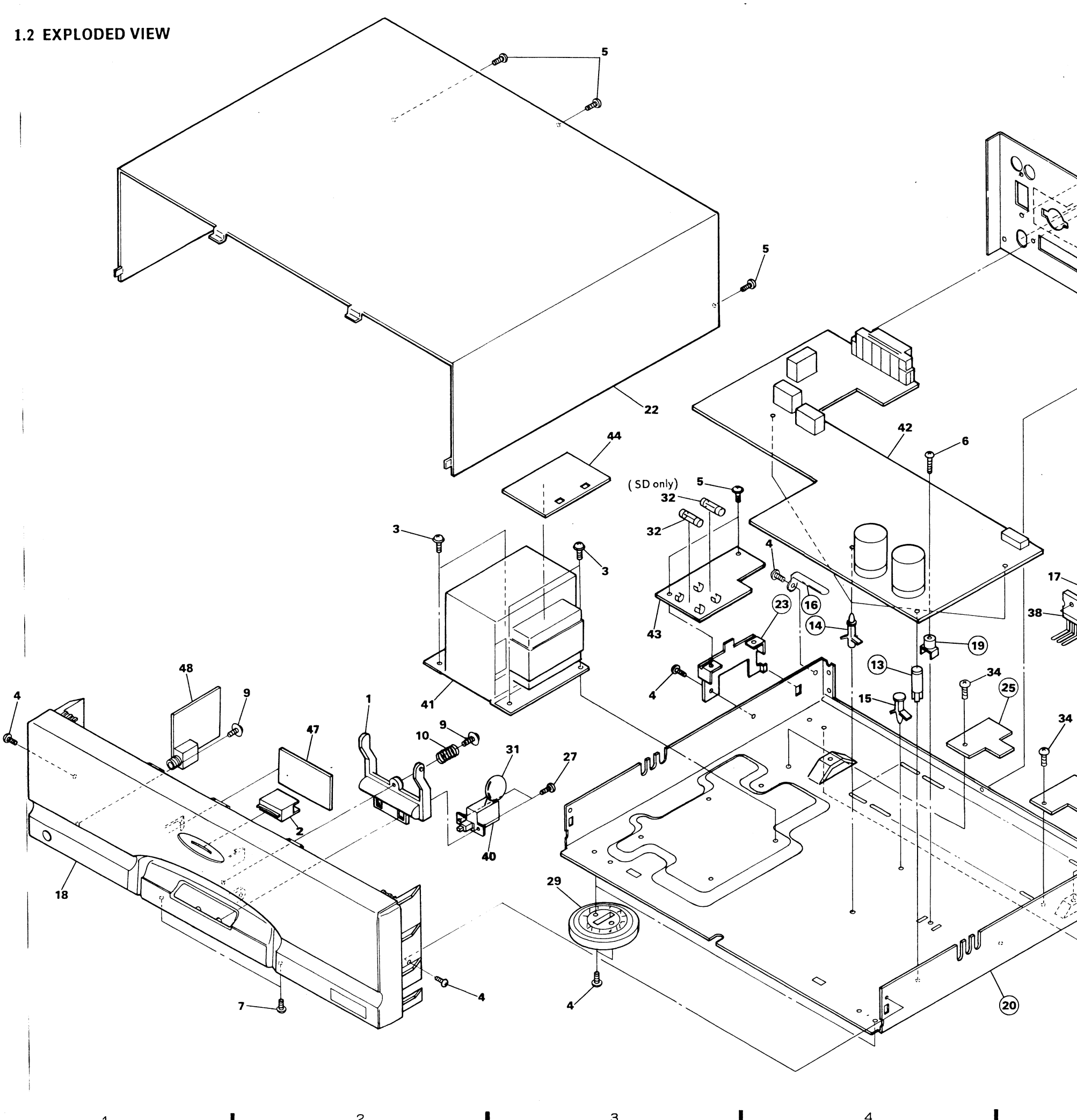
NOTES :

- *The parts with an encircled number are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

1.1 PARTS LIST

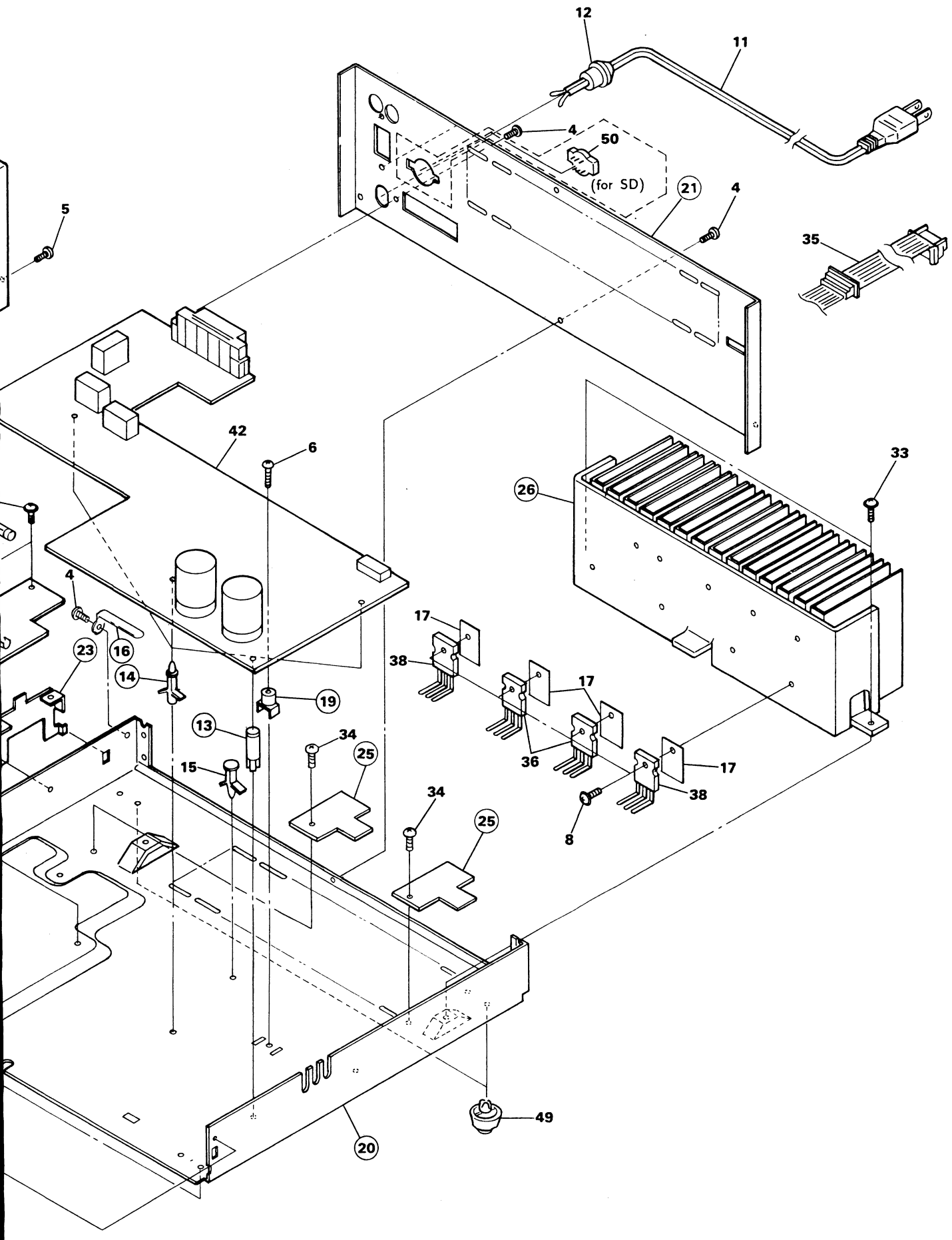
Mark	No.	Description	Parts No.
	1.	POWER BUTTON	AAD2109
	2.	INDICATOR LENS(PLS)	AAK2224
	3.	B TYTE	ABA1093
	4.	BIND B TYTE	ABA-298
	5.	B TYTE	ABA1011
	6.	BIND 3×18B TYTE	ABA1018
	7.	B TYTE 3×10	ABA−283
	8.	B TYTE 3×14	ABA1082
	9.	P TYTE 2.6×8	ABA1095
	10.	POWER BUTTON SPRING	ABH1079
⚠	11.	POWER CORD	ADG1103
⚠	12.	AC CORD STOPPER	AEC−882
	13.	PCB SUPPORT	AEC1010
	14.	PCB SUPPORT	AEC1216
	15.	PCB SPACER	AEC1303
	16.	BINDER	AEC−093
	17.	MIKA SHEET	AEE1014
	18.	FRONT PANEL ASS'Y	AMB1921
	19.	PCB MOLD	AMR1525
	20.	CHASSIS	ANA1161
	21.	REAR PANEL	ANC1797
	22.	BONNET(MTL)	ANE1320
	23.	P.C.B. HOLDER	ANG1609
	24.	·····	
	25.	CHASSIS COVER	ANG1627
	26.	HEAT SINK	ANH1249
	27.	SCREW	BBZ26P080FMC
	28.	·····	
	29.	FOOT ASS'Y	RXA1277
	30.	·····	
⚠	31.	CAPACITOR FOR POWER (C1)	ACG1003
⚠	32.	FUSE (FU1, 4A)	AEK−509
	33.	SCREW	ABA1147
	34.	BIND B TYTE	ABA1009
	35.	CONNECTOR CABLE(J)	ADE1117
⚠	36.	TRANSISTOR(Q3, Q4)	2SA1263N
	37.	·····	
⚠	38.	TRANSISTOR(Q1, Q2)	2SC3180N
	39.	·····	
⚠	40.	PUSH SWITCH(S1)	ASG1035
⚠	41.	POWER TRANSFORMER(T1)	ATS1385
◉	42.	POWER ASS'Y	AWZ3782
◉	43.	POWER SW ASS'Y	AWZ3789
◉	44.	TRANS CONNECT ASS'Y	AWZ3792
◉	45.	·····	
	46.	·····	
◉	47.	LED ASS'Y	AWZ3813
◉	48.	HEAD PHONE ASS'Y	AWZ3787
	49.	FOOT ASS'Y	AMR1937
⚠	50.	VOLTAGE SELECTOR (for SD only)	AKX−507

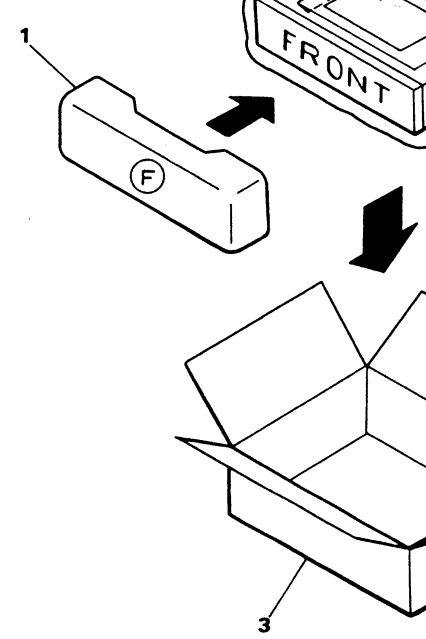
1.2 EXPLODED VIEW



1.3 PACKING

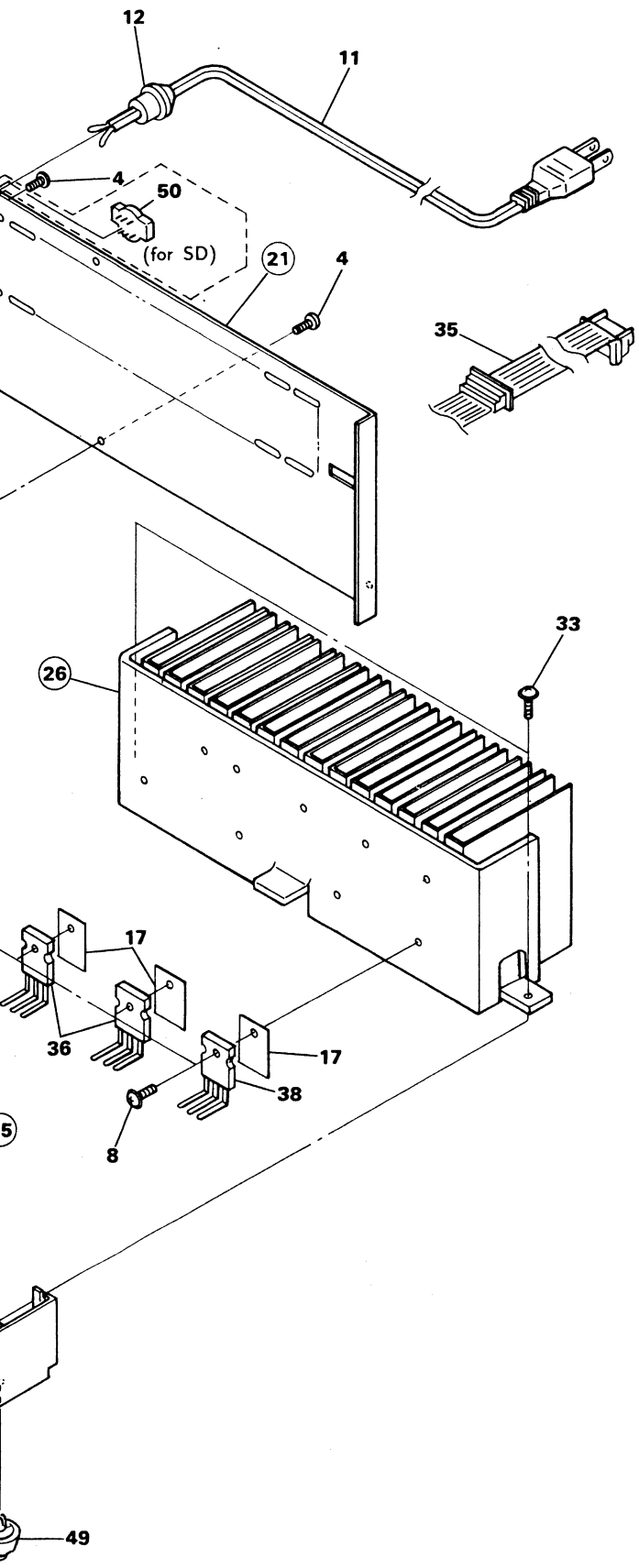
Mark	No.	Description	Parts No.
	1.	FRONT PAD	AHA1493
	2.	REAR PAD	AHA1494
	3.	PACKING CASE	AHD2193
	4.	PACKING SHEET	AHG1016
	5.	OPERATING INSTRUCTIONS (English, French)	ARE1215
	6.	REMOTE CONTROL UNIT (CU−MJ001)	AXD1238

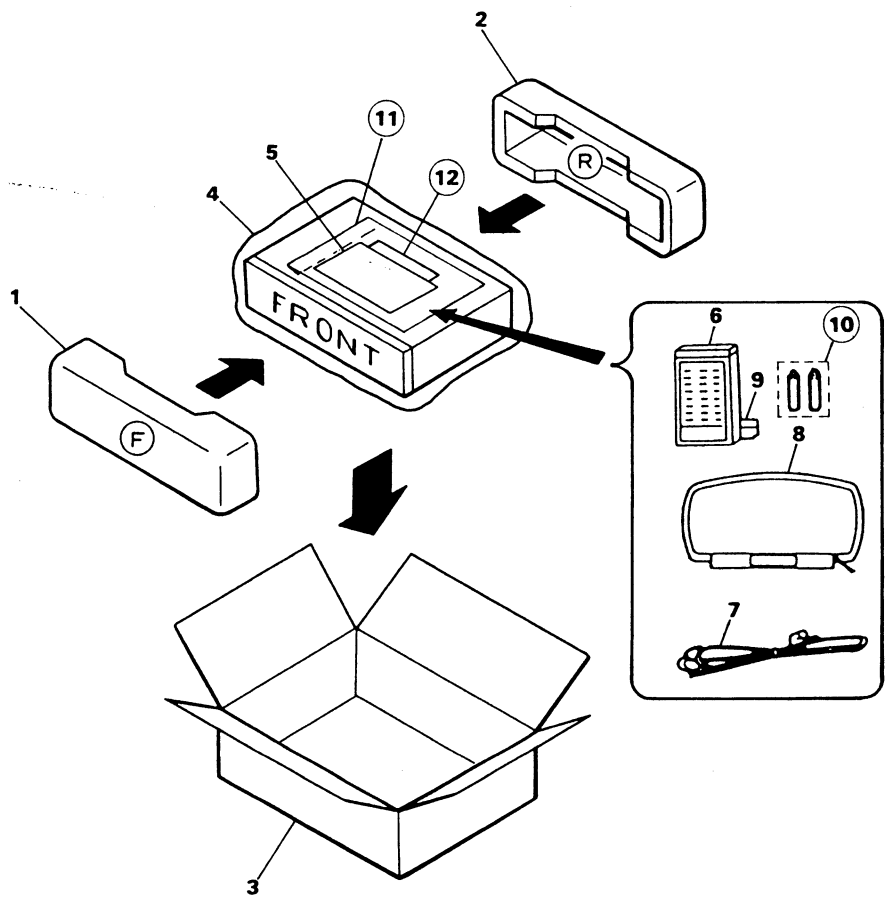




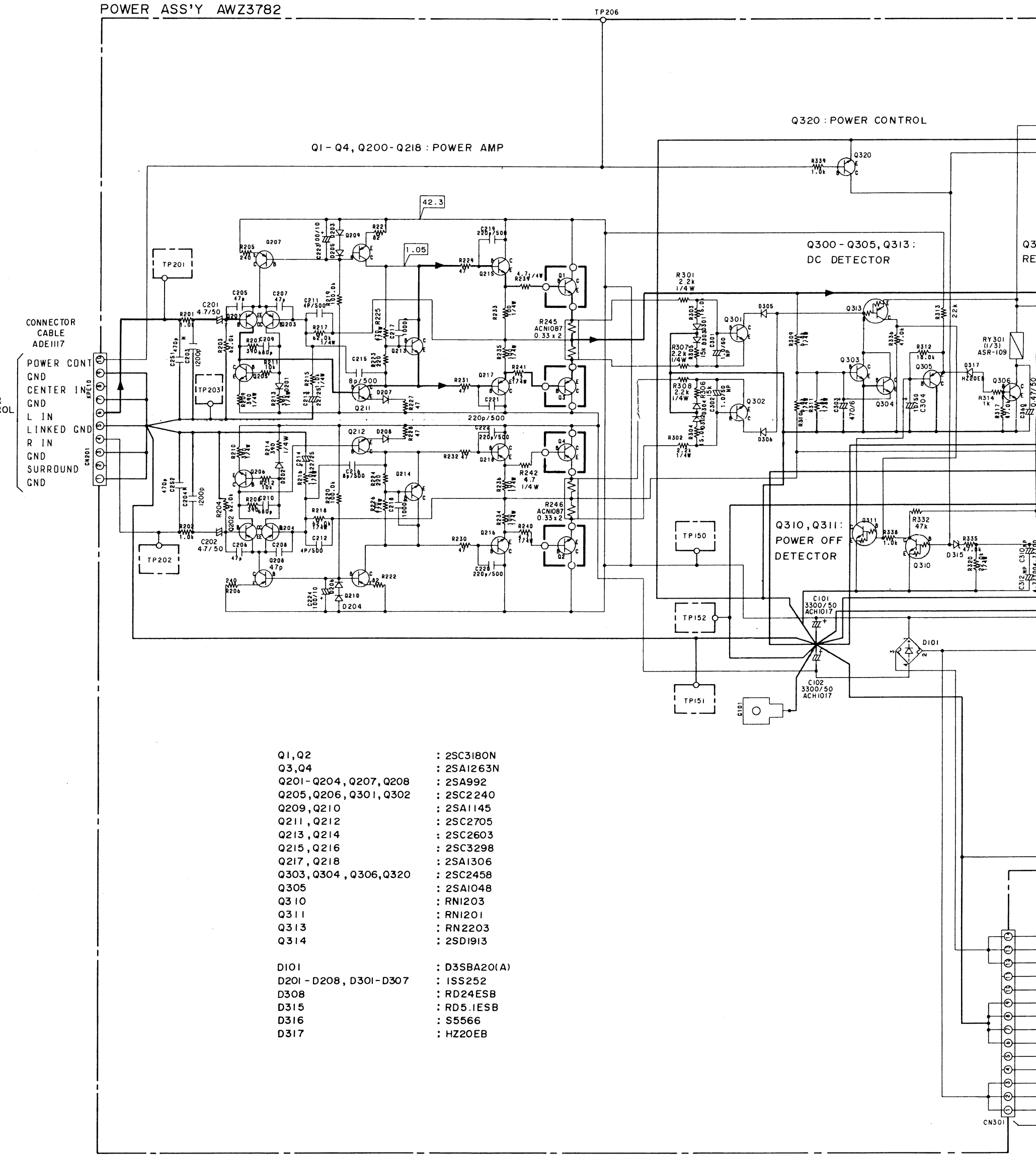
1.3 PACKING

Mark	No.	Description	Parts No.
	1.	FRONT PAD	AHA1493
	2.	REAR PAD	AHA1494
	3.	PACKING CASE	AHD2193
	4.	PACKING SHEET	AHG1016
	5.	OPERATING INSTRUCTIONS (English, French)	ARE1215
	6.	REMOTE CONTROL UNIT (CU−MJ001)	AXD1238
	7.	FM ANTENNA	ADH1005
	8.	AM LOOP ANTENNA Ass'y	ATB1006
	9.	BATTERY COVER	AZN2173
	10.	BATTERY (IEC R03, AAA)	AEX−021
	11.	LITERATURE BAG	AHG−117
	12.	WARRANTY CARD	ARW−088





2. SCHEMATIC DIAGRAMS



Q1, Q2	: 2SC3180N
Q3, Q4	: 2SA1263N
Q201 - Q204, Q207, Q208	: 2SA992
Q205, Q206, Q301, Q302	: 2SC2240
Q209, Q210	: 2SA1145
Q211, Q212	: 2SC2705
Q213, Q214	: 2SC2603
Q215, Q216	: 2SC3298
Q217, Q218	: 2SA1306
Q303, Q304, Q306, Q320	: 2SC2458
Q305	: 2SA1048
Q310	: RN1203
Q311	: RN1201
Q313	: RN2203
Q314	: 2SD1913
D101	: D3SBA20(A)
D201 - D208, D301 - D307	: 1SS252
D308	: RD24ESB
D315	: RD5.1ESB
D316	: S5566
D317	: HZ20EB

1. RESISTORS :
Indicated in Ω, 1/8, 1/6, 1/4W,, ±5% tolerance unless otherwise noted k ; kΩ, M ; MΩ, (F) ; ±1%, (G) ; ±2%, (K) ; ±10%, (M) ; ±20% tolerance.

2. CAPACITORS :
Indicated in capacity (μF)/voltage(V) unless otherwise noted p ; pF. Indication without voltage is 50 V except electrolytic capacitor.

3. VOLTAGE, CURRENT :
V ; Signal voltage at 40 W+ 40 W, 8 Ω output(1 kHz).
; DC voltage (V) at no input signal.
Value in ( ) is DC voltage at rated power.
⇦mA ; DC current at no input signal.

4. OTHERS :
➡ ; Signal route
⊘ ; Adjusting point
The ⚠ mark found on some component parts indicates the inportance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
※ marked capacitors and resistors have parts numbers.
This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

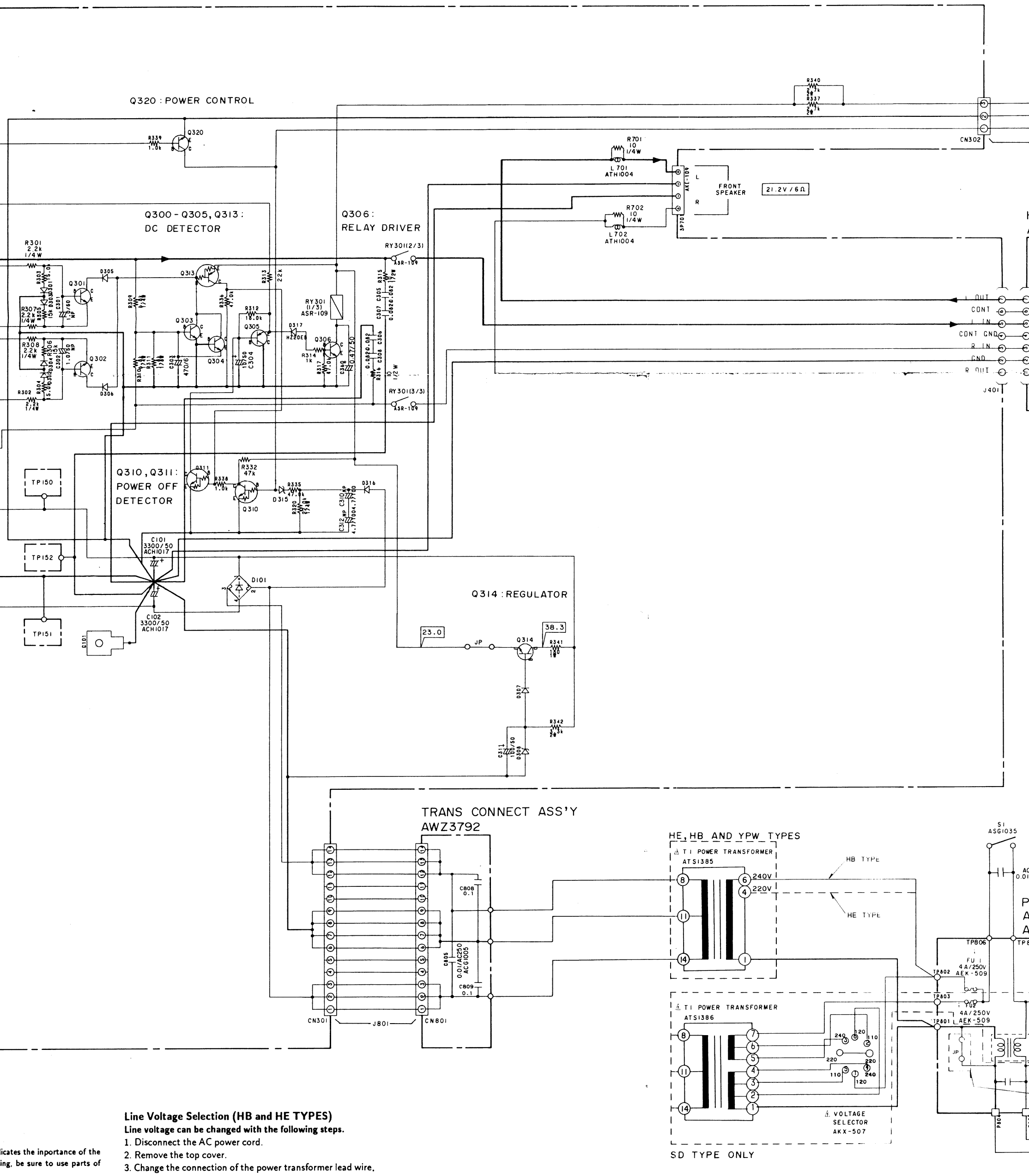
5. SWITCHES : (The underline indicates the switch position)
S 1 : ON-OFF

Line Voltage Selection (HB and HE TYPES)

Line voltage can be changed with the following steps.

1. Disconnect the AC power cord.
2. Remove the top cover.
3. Change the connection of the power transformer lead v
4. Stick the line voltage label on the rear panel.

Parts No.	Description	
AXX-193	220 V label	- - - - - 220 V-230
AXX-192	240 V label	——— 240 V



Line Voltage Selection (HB and HE TYPES)

Line voltage can be changed with the following steps.

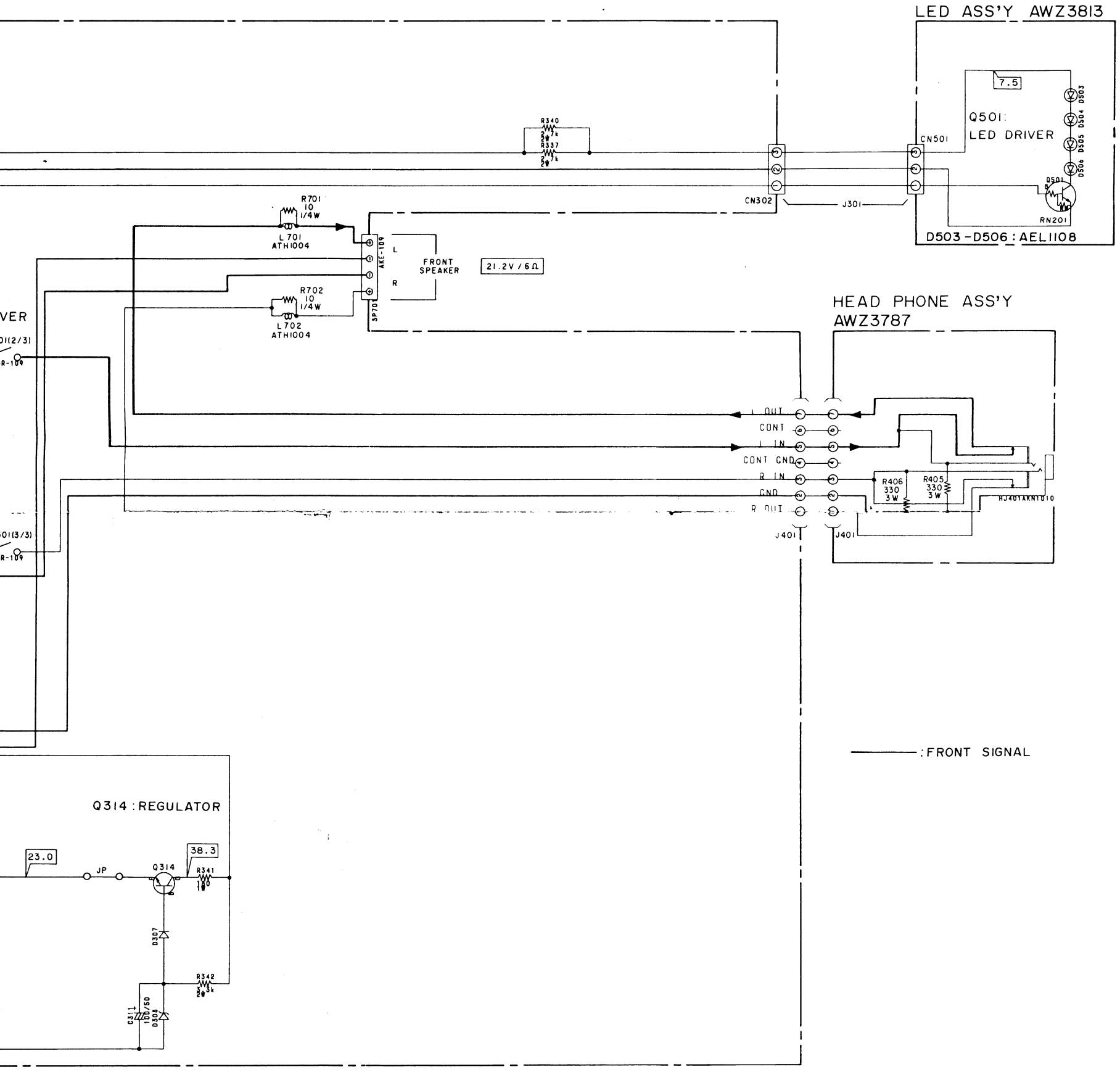
1. Disconnect the AC power cord.
2. Remove the top cover.
3. Change the connection of the power transformer lead wire.
4. Stick the line voltage label on the rear panel.

Parts No.	Description		
AXX-193	220 V label	- - - - -	220 V-230 V
AXX-192	240 V label	———	240 V

licates the inportance of the
ing, be sure to use parts of

bers.
ual circuit may vary due to

osition)


LED ASS'Y AWZ3813
7.5
Q501:
LED DRIVER
CN501
D503
D504
D505
D506
D501
RN201
D503 - D506 : AEL1108
CN302
J301
R340
R337
R701
10
1/4W
L701
ATH1004
R702
10
1/4W
L702
ATH1004
AKE-109
SP701
L
R
FRONT
SPEAKER
21.2V / 6Ω
HEAD PHONE ASS'Y
AWZ3787
L OUT
CONT
L IN
CONT GND
R IN
GND
R OUT
J401
J401
R406
330
3W
R405
330
3W
HJ401AKN1010
VER
D11(2/3)
R-109
501(3/3)
R-109
Q314 : REGULATOR
23.0
JP
Q314
38.3
R341
100
D307
R342
3.3k
2W
C311
1000/50
D308
A
B
C
D
——— : FRONT SIGNAL
TRANS CONNECT ASS'Y
AWZ3792
HE, HB AND YPW TYPES
T1 POWER TRANSFORMER
ATS1385
HB TYPE
HE TYPE
240V
220V
C808
0.1
C805
0.01/AC250
ACG1005
C809
0.1
CN801
T1 POWER TRANSFORMER
ATS1386
VOLTAGE
SELECTOR
AKX-507
SD TYPE ONLY
S1
ASG1035
C1
ACG1003
0.01/AC400
POWER SW ASS'Y
AWZ3789 (HE, HB AND YPW TYPES)
AWZ1510 (SD TYPE ONLY)
TP806
TP807
FU1
4A/250V
AEK-509
TP802
TP803
FU2
4A/250V
AEK-509
TP801
L801
ATF-151
JP
JP
C801
ACG1002
0.01/AC400
HE, HB AND YPW
TYPES
P801
P802
AC POWER CORD
ADG1102 AC220V (HE TYPE)
ADG1103 AC240V (HB TYPE)
ADG1104 AC110/120-127/220/240V (SD TYPE)
ADG1105 AC240V (YPW TYPE)
E
F
6
7
8
9

4. PCB PARTS LIST

NOTES :

- *Part without part number cannot be supplied.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 *When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).*

560Ω 56×10¹ 561 ..... *RD1/4PS 5 6 1 J*
47kΩ 47×10³ 473 ..... *RD1/4PS 4 7 3 J*
0.5Ω 0R5 ..... *RD2H 0 R 5 K*
1Ω 010 ..... *RD1P 0 1 0 K*

Ex.2 *When there are 3 effective digits (such as in high precision metal film resistors).*

5.62kΩ 562×10¹ 5621 ..... *RD1/4SR 5 6 2 1 F*

Mark	No.	Description	Parts No.

LIST OF ASSEMBLIES

◉	POWER Assembly	AWZ3782
◉	HEAD PHONE Assembly	AWZ3787
◉	POWER SW Assembly	AWZ3789
◉	TRANS CONNECT Assembly	AWZ3792
◉	LED Assembly	AWZ3813

◉POWER Assembly(AWZ3782)

SEMICONDUCTORS

Q201–Q204 TRANSISTOR	2SA992
Q205,Q206 TRANSISTOR	2SC2240
Q207,Q208 TRANSISTOR	2SA992
Q209,Q210 TRANSISTOR	2SA1145
Q211,Q212 TRANSISTOR	2SC2705
Q213,Q214 TRANSISTOR	2SC2603
Q215,Q216 TRANSISTOR	2SC3298
Q217,Q218 TRANSISTOR	2SA1306
Q301,Q302 TRANSISTOR	2SC2240
Q303,Q304 TRANSISTOR	2SC2458
Q305 TRANSISTOR	2SA1048
Q306 TRANSISTOR	2SC2458
Q310 TRANSISTOR	RN1203
Q311 TRANSISTOR	RN1201
Q313 TRANSISTOR	RN2203
Q314 TRANSISTOR	2SD1913
Q320 TRANSISTOR	2SC2458
D101 DIODE	D3SBA20(A)
D201–D208 DIODE	1SS252
D301–D307 DIODE	1SS252
D308 ZENER DIODE	RD24ESB
D315 ZENER DIODE	RD5.1ESB
D316 DIODE	S5566
D317 ZENER DIODE	HZ20EB

RELAYS

RY301 RELAY	ASR–109

COILS, FILTERS

L701,L702 COIL	ATH1004

Mark	No.	Description	Parts No.
CAPACITORS			
	C101,C102	ELECTROLYTIC CAPACIT	ACH1017
	C201	ELECTROLYTIC CAPACIT	CEJA4R7M50
	C202	ELECTR.CAPACITOR	CEAS4R7M50
	C203,C204	MYLAR FILM CAPACITOR	CQMA122K50
	C205	AXIAL CERAMIC C.	CCPUSL470J50
	C206-C208	CERAMIC CAPACITOR	CCCSL470J50
	C209,C210	CERAMIC CAPACITOR	CKCYB681K50
	C211,C212	CERAMIC CAPACITOR	CCCSL040C500
	C213,C214	ELECTR.CAPACITOR	CEAS220M25
	C215,C216	CERAMIC CAPACITOR	CCCSL080D500
	C217,C218	CERAMIC CAPACITOR	CKCYB102K50
	C219-C222	CERAMIC CAPACITOR	CCCSL221K500
	C223,C224	ELECTR.CAPACITOR	CEAS101M10
	C251,C252	CERAMIC CAPACITOR	CKCYB471K50
	C301,C302	ELECTR.CAPACITOR	CEANP010M50
	C303	ELECTROLYTIC CAPACIT	CEAS471M6
	C304	ELECTR.CAPACITOR	CEAS100M50
	C305-C308	AUDIO FILM CAPACITOR	CFTXA823J50
	C310	ELECTROLYTIC CAPACIT	CEANP4R7M100
	C311	ELECTR.CAPACITOR	CEAS101M50
	C312	ELECTROLYTIC CAPACIT	CEANP4R7M100
	C360	ELECTR.CAPACITOR	CEASR47M50
RESISTORS			
	R209,R210	FUSLIBLE RESISTOR	RFA1/4PS391J
	R213,R214	FUSLIBLE RESISTOR	RFA1/4PS391J
	R215-R218	CARBON FILM RESISTOR	RD1/4PM□□□J
	R225,R226	CARBON FILM RESISTOR	RD1/4PM471J
	R227-R232	FUSLIBLE RESISTOR	RFA1/4PS470J
	R233-R236	CARBON FILM RESISTOR	RD1/4PMFL101J
	R239-R242	FUSLIBLE RESISTOR	RFA1/4PS4R7J
	R245,R246	RESISTOR (0.33, 5W)	ACN1087
	R301,R302	CARBON FILM RESISTOR	RD1/4PMF222J
	R307,R308	CARBON FILM RESISTOR	RD1/4PMF222J
	R309,R310	CARBON FILM RESISTOR	RD1/4PM682J
	R315,R316	CARBON FILM RESISTOR	RD1/2PMF100J
	R320	CARBON FILM RESISTOR	RD1/4PM223J
	R337,R340	METAL OXIDE RESISTOR	RS2LMF272J
	R341	METAL OXIDE RESISTOR	RS1PMF181J
	R342	METAL OXIDE RESISTOR	RS2LMF332J
	R701,R702	FUSLIBLE RESISTOR	RFA1/4PS100J
	Other resistors		RD1/8PM□□□J
OTHERS			
	CN201	CONNECTOR(10P)	KPE10
		SPEAKER TERMINAL 4-P	AKE-109

HEAD PHONE Assembly(AWZ3787)

Mark	No.	Description	Parts No.
RESISTORS			
	R405	METAL OXIDE RESISTOR	RS3LMF331J
	R406	METAL OXIDE RESISTOR	RS3PMF331J
OTHERS			
		JACK	AKN1010

◉POWER SW Assembly(AWZ3789)

Mark	No.	Description	Parts No.
CAPACITORS			
	C801	CKA (0.01/AC400V)	ACG1002

◉TRANS CONNECT Assembly(AWZ3792)

Mark	No.	Description	Parts No.
CAPACITORS			
	C805	CKA (0.01/AC250V)	ACG1005
	C808,809		CQMXA104J100

◉LED Assembly(AWZ3813)

Mark	No.	Description	Parts No.
SEMICONDUCTORS			
	Q501	TRANSISTOR	RN1201
	D503-D506	LED(RED)	AEL1108

5. FOR HE, SD AND YPW TYPES

5.1 CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- *Parts without part number cannot be supplied.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*

M-J200/HE, SD, YPW and M-J200/HB have the same construction except for the following:

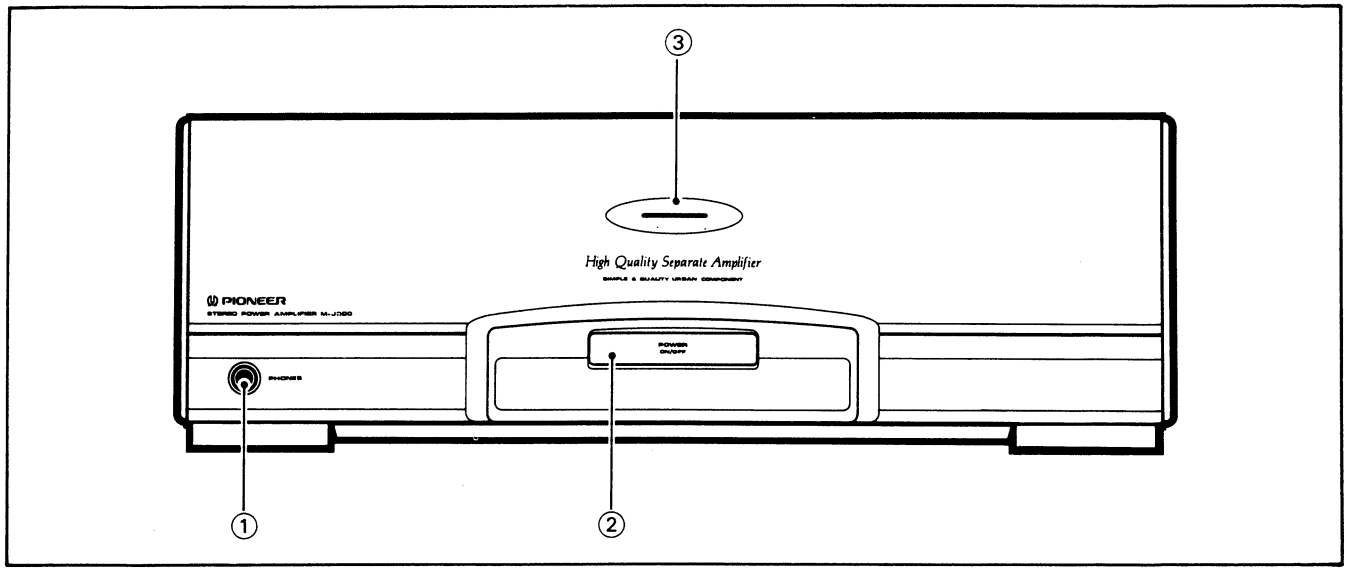
Mark	Symbol & Description	Part No.				Remarks
		HB type	HE type	SD type	YPW type	
	POWER SW Assembly	AWZ3789	AWZ3789	AWZ1510	AWZ3789	
⚠	Power Transformer T1 (AC 220/240V)	ATS1385	ATS1385	.....	ATS1385	
⚠	Power Transformer T1 (AC 110/120−127/220/240V)	.....	.....	ATS1386	.....	
⚠	Voltage Selector (AC 110/120−127/220/240V)	.....	.....	AKX-507	.....	
⚠	AC Power Cord	ADG1103	ADG1102	ADG1104	ADG1105	
	Operating Instructions (English, French)	ARE1215	ARE1215	ARE1215	ARE1215	
	Operating Instructions(German, Italian)	.....	ARC1314	.....	.....	
	Operating Instructions (Dutch, Swedish, Spanish, Portguese)	.....	ARC1317	.....	.....	

POWER SW ASSEMBLY(AWZ1510)

POWER SW assembly (AWZ1510) and POWER SW assembly (AWZ3789) have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ3789	AWZ1510	
⚠	L801	.....	ATF−151	

6. PANEL FACILITIES



① PHONES jack
For stereo headphones.

NOTE:
There is no output from the speakers when headphones are plugged into PHONES jack.

② POWER ON/OFF switch
This is the switch for electric power.
When the power is ON, the power indicator ③ lights.

③ Power indicator

7. SPECIFICATIONS

POWER AMPLIFIER: M-J200

Continuous power output (DIN)
40 W + 40 W (1 kHz, T.H.D. 1 %, 8 Ω)
Music power (DIN)
150 W + 150 W (1 kHz, T.H.D. 1 %, 8 Ω)
Total harmonic distortion
1 kHz, 20 W, 8 Ω ..... 0.09 %*

Electrical Section, Other
Power requirements
European models ..... AC 220 – 230 V, 50/60 Hz
U.K. models ..... AC 240 V, 50/60 Hz
Multi-voltage models ..... AC 110/120–127/220/240 V (switchable), 50/60 Hz
Power consumption ..... 204 W
External Dimensions ..... 360 (W) x 120.5 (H) x 338 (D) mm
Weight ..... 5.4 kg

Accessories
Operating Instructions 1

* *Measured by Audio Spectrum Analyzer.*